WHAT IS CLAIMED IS:

1. A toroidal type continuously variable transmission comprising:

input and output discs coaxially and rotatably arranged about a common axis, the input and output discs having respective toroidal concave surfaces which face each other;

power rollers each having a rounded outer surface and being interposed between the toroidal concave surfaces of the input and output discs;

a loading cam that presses the input disc against the power rollers by a force that is proposal to an input torque;

trunnions each supporting the corresponding power roller in such a manner that the power roller is inclinable relative to a center of curvature of the input and output discs; and

power roller bearings rotatably supporting the power rollers relative to the respective trunnions,

wherein the following inequality is established for a curvature ratio (Ro/(2 x R22)):

$$Ro/(2 \times R22) \leq 0.63$$

wherein:

Ro: radius of curvature of the toroidal concave surface of each of the input and output discs, that is defined on a cross section of each of the input and output discs taken along the common axis,

R22: radius of curvature of the rounded outer surface of each power roller, that is defined on a cross section of the power roller taken along the common axis.

2. A toroidal type continuously variable transmission as claimed in Claim 1, in which the following inequality is further established:

$$Ro/(2 \times R22) \geq 0.53$$

3. A toroidal type continuously variable transmission as claimed in Claim 1, in which the following inequality for a bearing stress "BS" is further established:

$$BS \leq 4.2 \text{ Gpa}$$

wherein:

BS: stress applied to a contact surface between the power roller and each of the input and output discs during operation of the transmission.

4. A toroidal type continuously variable transmission as claimed in Claim 1, in which the following inequality for a bearing stress "BSt" is established:

$$BSt \leq 4.2 \text{ Gpa}$$

wherein:

BSt: stress applied to a contact surface between the power roller and each of the input and output discs when a maximum engine torque is applied to the transmission.

5. A toroidal type continuously variable transmission as claimed in Claim 1, in which the following inequality is further established:

$$S \geq 0$$

wherein:

S: spin degree at a contact point between the power roller and each of the input and output discs.

6. A toroidal type continuously variable transmission as claimed in Claim 5, in which the spin degree "S" is calculated from the following equation:

$$S = \varpi s / \varpi i$$

wherein:

ϖs: spin angular speed of the power roller,

ϖi: angular speed of the input disc.

7. A toroidal type continuously variable transmission as claimed in Claim 6, in which the spin degree "S" is calculated form the following equation.

$$S = \{\sin\theta \times \sin\phi - (1 + k - \cos\phi) \times \cos\theta\} / \sin\theta$$

wherein:

θ: open angle defined between a normal line of a contact point between the power roller and the output disc and a rotation axis of the power roller,

ϕ: inclination angle of the power roller, and

k: cavity aspect ratio, that is, ratio of a difference (e) between a distance from the center (O1) of curvature of the input disc to the common axis (DA) of the input and output discs and the radius of curvature (Ro) relative to the radius of curvature (Ro).

8. A toroidal type continuously variable transmission as claimed in Claim 5, in which the inequality "$S \geq 0$" is kept established throughout a range from a lower speed side to a higher speed side.

9. A toroidal type continuously variable transmission as claimed in Claim 1, in which an input member of the loading cam is connected to an engine through a torsion damper.

10. A toroidal type continuously variable transmission as claimed in Claim 1, in which an input member of the loading cam is connected to an engine through a torque converter.